

REMARKS

In an Office Action dated February 3, 2004, the Examiner rejected claims 1-11, 13-14, and 17-19 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,628,646 (Angle); and rejected claim 12 under 35 U.S.C. 103(a) as being unpatentable over Angle in view of U.S. Patent 6,026,151 (Bauer). The Examiner objected to claims 15-16 and 20-22 as being dependent upon a rejected base claim but indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Responsive to the grounds for this rejection, Applicants are amending claims 15-16 and 20-22 to include all restrictions of their base and intervening claims, in order to capture the subject matter of these claims and is adding claim 23, an apparatus claim essentially equivalent to method claim 20.

In addition, Applicants respectfully submit that the subject matter of claims 1-11, 13-14, and 17-19 as amended herein should be held allowable over the cited prior art.

The primary prior art document is Angle. (Bauer was cited only to reject the dependent claim which indicated that the master controller also accumulated billing records). Applicants would first like to describe the subject matter of Angle and the subject matter of their invention.

Angle discloses an arrangement for routing unicast and multicast messages efficiently. The core of Angle's switch is a fabric 120 connected to multiple line cards 105 which allows the line cards to communicate with each other simultaneously. The fabric manager 110, indicated by the Examiner as being equivalent to Applicants' master controller,

is coupled to each line card 105 and to the fabric 120. At the beginning of each scheduling cycle, through its interface with a line card 105, the fabric configuration manager 110 may receive information regarding the cells that are ready for transmission across fabric 120. Briefly, the fabric configuration manager 110 is responsible for determining a conflict free matching of ports each time slot, configuring the fabric 120 to form connections between the appropriate fabric interfaces 115, and communicating the scheduling decision to the fabric inputs 107.... [T]he novel fabric configuration manager 110 includes independent unicast and multicast schedulers that allow flexible scheduling, such as pipeline staging of multicast and unicast scheduling and programmable multicast scheduling frequency.

[Angle, column 4, line 49-64]

In other words, Angle discloses a router, i.e., a switch for directly routing packets whose destination is already known.

Applicants' disclosure teaches arrangements for a flexible switching system capable of offering call features, for determining the destination and treatment of packet switched or circuit switched calls presented to the switch. In accordance with Applicants' teachings, the switch includes a switching fabric, which can be either a circuit switching fabric or a packet switching fabric, a master controller, and a plurality of feature servers. The fabric is responsive to messages from the master controller and the plurality of feature servers for establishing connections through the switching fabric. The master controller selects a feature server to process each set of call processing request messages communicates with a plurality of feature servers for processing these call processing request messages. The feature servers can each process call processing request messages for a class of calls. The feature servers then can request establishment of connections by sending connection setup request messages to the fabric or by sending connection request messages to the master controller for requesting the master controller to send connection setup request messages to the fabric. In some cases, the feature processors do not retain state information for a call but pass state change messages to the master controller which maintains the state of each call. In other cases, the feature processors maintain the state of the call.

As stated on page 8, lines 3-10 of Applicants' specification:

[T]he master controller is responsible for the centralized control and supervision of the various types and instances of feature servers that provide the call control and call processing functions of the switching system. The master controller is a fault tolerant database management computer cluster. Its basic functions include storing information about the configuration of a particular central office (or a portion of a large multi-location network called a domain), office or domain translations, storage of per call data, including the state of the call, and storage of customer and trunk specific static data (line and trunk translations) and dynamic data (current state data).

In terms of the specific subject matter of Applicants' claims, Applicants, in clause 3 of claim 1, recite a plurality of feature servers connected to the core switching fabric for performing call processing functions. According to the added clause 7 of claim 1, it is

the feature servers that process all call control request messages. In contrast, the line cards 105 which provide the inputs (transmit requests 235 (FIG. 2) of Angle are not feature servers. The ports of these line cards request the transmission of unicast or multicast messages whose destination has previously been determined by call servers (not shown in Angle's disclosure of a router).

With respect to the fourth clause of claim 1, Applicants' master controller receives call processing request messages and transmits such call processing request messages to a selected one of the plurality of feature servers. The cited passage of Angle states the following:

The transmit requests 235 identify the output ports, if any, to which the corresponding input port has a cell ready to be transferred. As will be described further below, the transmit requests 235 may be presented to one or both of the multicast scheduler 215 and the unicast scheduler 220 in the form of request vectors for each output port 109.

① → Thus, what Angle teaches in the cited passage is a master controller for receiving connection request messages, not call processing request messages. The transmit requests 235 identify the output ports, if any, to which the corresponding input port has a cell ready to be transferred. These are quite different from call processing request messages which request a feature server to analyze the call processing request message and determine where and how the call is to be routed. In order to process call processing request messages, the feature servers are likely to perform translations on the identity of the destination as specified in the call request message and determine special details of how a call is to be handled.

With respect to the fifth clause of claim 1, Applicants' feature servers generate call control messages for transmission via the core switching fabric to peripheral equipment [such as trunk control equipment of trunk gateway 30] for implementing a call control function specified in a call control message. The passage cited by the Examiner as anticipating this function is quoted below:

In the embodiment depicted, the fabric configuration manager 110 has control information interfaces with the input ports 107, the output ports 109, and the fabric 120. Control information generated by the fabric configuration manager 110 includes information regarding queue selection 240 and 255 which is sent to each time slot to those of the input ports and output ports participating in the

schedule generated by the multicast scheduler 215 and/or the unicast scheduler 220. Additionally each timeslot, the fabric configuration manager 110 produces a fabric configuration 260 based upon the current schedule. The fabric configuration 260 is communicated to the fabric 120 each time slot to activate the fabric 120 and cause the fabric 120 to form appropriate connections among the fabric interfaces 115 to accommodate the current schedule.

This paragraph clearly indicates that in Angle the fabric configuration manager 110 controls the fabric and establishes all connections through the fabric required to send unicast and multicast messages through the fabric. There is no equivalent to a feature server generating call control messages for transmission via the core switching fabric to peripheral equipment for implementing a call control function specified in a call control message.

The above arguments also apply to independent method claim 17. Accordingly, Applicants respectfully submit that the subject matter of claims 1 and 17 is not taught by Angle and should therefore be allowable and further that claims 2-14 and 18-19, dependent from claims 1 and 17, respectively, should therefore also be held allowable.

In addition, and alternatively, claim 2 should be held allowable since the teachings of Angle have no meaning in a circuit switched network; claim 4 should be held allowable since Angle not only shows no feature servers, but certainly shows no plurality of different types of feature servers; claim 6 should be held allowable since Angle does not show feature servers for receiving call state information; and claim 13 should be held allowable since Angle not only shows no feature servers, but certainly shows no feature servers which retain no state information for processing a call processing request message.

Accordingly, Applicants respectfully request that the Examiner reconsider the grounds for the rejection of claims 1-11, 13-14, and 17-19, allow these claims as well as claims 15-16 and 20-22 previously held allowable if rewritten independent form including all of the limitations of the base claim and any intervening claims as now submitted, and new claim 23 which is essentially an apparatus version of claim 20, and pass the application including all of these claims to issue.

If the Examiner feels that a fax or voice contact would help to advance the prosecution of this application, the Examiner is invited to call or fax Applicants' attorney at 630 469-3575.

Respectfully submitted

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Date: April 22, 2004